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The Role and Efficiency of Multidisciplinary Team Meeting in the Management of Urology Cancers and Strategies to Improve Its Effectiveness and Utility.

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Abstract
Background: *The role and utility of the multidisciplinary teams (MDT) for improving clinical decision making and care for urological cancer is increasing globally. Evidence exists of advantage to patients and healthcare professionals.*
Objective: *This study aims to explore doctors' members' views on advantages of existing practices MDT working, and to identify potential suggestions for improving the efficiency and productivity of the MDT meeting, and to proof how it saving the time and affect the decisions making.*
Method: *The members of urology clinical meeting (UCM) and the MDTin Al-Shahid Ghazi al-Hariri surgical specialties Hospitals in Baghdad Medical city complex were purposively invited to participate in Survey by answering questioners items included questions about the utility and efficiency of MDT meetings, usefulness of MDT in medical education, and identity the strategies for improving the efficacy of MDT meetings: by treating cases by protocol, prioritizing the cases and a splitting the MDT into subspecialty meetings,In Part B of the study, a two groups of urological cancers cases irrespective to their tumor types, stage, grade, patient's age or gender were selected and divided into two groups, the cases in the group 1 and group 2 had been discussed in the UCM and the MDT meeting respectively, with observation for the effects of both meetings on the decisions making &the time from definitive diagnosis to initiation of treatment irrespective to outcome.*
Results: *This study shows that 77 of participants involved in this study, 85.7 % of participants agreed that the MDT are considered important and central to the delivery of better quality cancer care and treatment of urological cancers, its helped in the decision-making, provided plans and offered different options of treatment to the patients. The participants agreed that the suggestions for splitting MDT meeting according sub specialtieswill improve its effectiveness,There was a agreement that cases at the MDT meeting could be prioritized by complexity, and the availability of MDT members. MDT meeting had significant effect on decisions making and time saving.*
Conclusion: *The Multi-disciplinary teams are considered important & central to the delivery of better quality cancerous care and treatments for urological cancers.*
The MDT meeting helped in decisions making, provided plans and offered different options of treatment to the patients. The MDT saves the time and reduced the time between diagnosis and the initiation of treatment. The suggestions for improving the effectiveness of MDT meetings are possible by the prioritizing the cases according to previously agreed protocols and Splitting of the MDT meeting according the specialties.

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I. Introduction

A Multidisciplinary Team Meeting is a meeting of the group of professionals from one or more clinical disciplines, who together make decisions regarding recommended treatment of each individual patient. MDT may specialize in certain conditions, such as Cancer, or other specific disease. (1)

Urology (MDT) is can be defined as a well-established group of a specialist experts and interest with in the diagnosis, treatment and management of patients with urological cancer.Forthe Urological Cancer;the team includes doctors, nurses and other health provider's professionals who manage the treatment of urological cancers.MDTshould improve, communication, coordination, and decision making between health-care team members and patients, and hopefully produce more positive outcomes. (2-10).

Aim of the study: To asses benefits of MDT for Patients, regarding decision making, providing updates & new modality of treatment for urological cancers and provide suggestions to improve effectiveness of MDT.

II. Materials and Method

A prospective cross-sectional survey study had been conducted in the hospitals of medical city complex from October2015 to October 2017. It included team's members who are interested in management of urological cancers (oncologist, urologist, pathologist, radiologist & other specialties) in both:localurology clinical meeting(LUCM) in urology departmentsand the General MDTmembers meeting (MDT meeting for all cancer cases in different specialties in medical city).

Patients design:

The prospective cross sectionals study including 79 urological cancers cases of different types, stages and age groups had been collected and represented randomly according to their presentation to urologic outpatient clinic, the patients were divided into two groups, group 1 were discussed in the L-UCM, and group 2 had been discussed in the G-MDT from October /2015- October / 2017.

All patients were assessed by the history, physical examinations and investigations (hematological, image study and sometime invasive diagnostic procedure).

All cases in group 1 were discussed in a weekly urological clinical meeting (UCM) every Sunday from 7:30 to 8:30 am.

All cases in the group 2 were discussed in the MDT meeting which held once weekly every Tuesday from 8:00. - to 9:00 a.m. , each case presented on data show in 5 minutes, and 10 -15 minuets discussions between MDT members in the presence of patients.The members of MDT include:Urologist, Oncologist Histopathologist, Radiologist , General surgeons , Anesthesiologist, Other specialties (neurosurgery, CVS, maxillofacial and etc.…) and Post graduate student s in different specialties.

The data collected from a questionnaires filled by participants of MDT meeting and members of UCM in urology department. The questioner included multiple closed ended questions **which represent the Benefit of MDT,** The difference in clinical decision making and the measures to improve it.

Statistical Analysis

Statistical package for social science version 20 (SPSS 20) was used for both data entry and data analysis. Continuous variables were presented as mean ± SD and discrete variables presented as number (%). T test for independence used to test the significance of association for continuous variable andChi-square test (or fisher exact test when appropriate) for discrete variable's-value of < 0.05 were considered significant.

Theresults :

The distribution of specialitiesparticipitate in this study was shown in figurebelow :

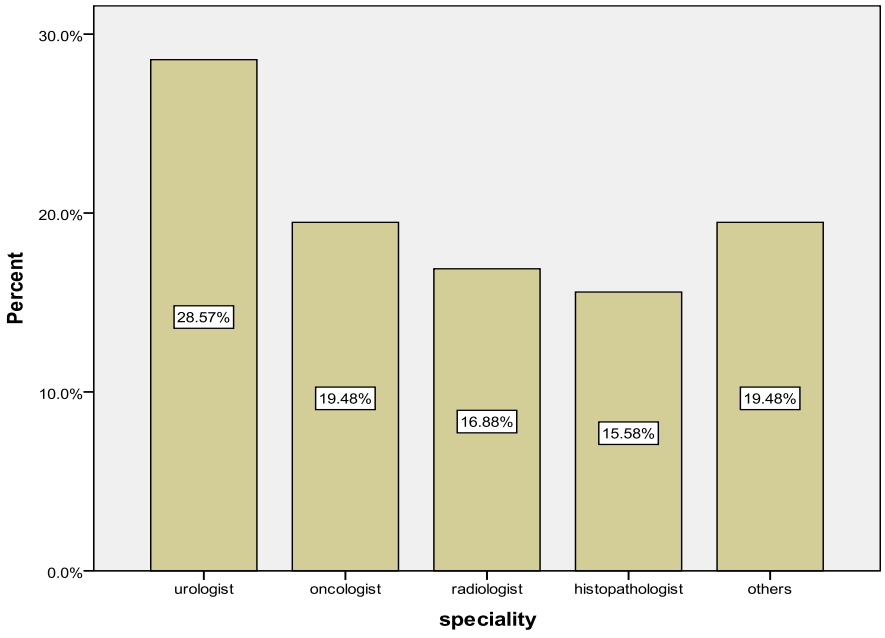

Figure1: Show distribution of doctors who participate in the study according to specialty**.**

Answers of doctors to questioners which represent Benefit of MDT are show in table 1.

Table 1: Responses of doctors to questioners which represent Benefit of MDT.

Benefit of MDT		Frequency	Percent
Did you think the MDT meeting is important for urologic cancers?	yes	66	85.7
	no	11	14.3
Does it save the time & decrease delay in treatment?	yes	60	77.9
	no	17	22.1
Does it help to decrease unnecessary investigation?	yes	60	77.9
	no	17	22.1
Does it help in making decisions, providing multiple treatment plans and options of treatment to the patients?	yes	71	92.2
	no	6	7.8
Does it improve the passage of patients from one specialty to another in rapid way?	yes	68	88.3
	no	9	11.7
Does it Facilitate face to face discussion between MDT members?	yes	71	92.2
	no	6	7.8
Does it improve patient counseling (being familiar with the clinical history, results of investigations and proposed treatment?	yes	65	84.4
	no	12	15.6

Answers of the doctors to the questioners which represent suggestions for changes in the format of the MDT were show in the table 2.

Table 2. Responses of doctor to questioners which represent suggestion for change in format of MDT

Suggestion for improving MDT		Frequency	Percent
Do you suggest Splitting of MDT according to specialties?	yes	66	85.7
	no	11	14.3
Your suggestion for time of the MDT	1hr	72	93.5
	2hr	5	6.5
Your suggestion for frequency of the MDT	Once weekly	70	90.9
	Twice weekly	7	9.1
Do you suggest prioritizing of the MDT meeting by type of tumor?	yes	50	64.9
	no	27	35.2
Do you suggest prioritizing of the MDT meeting by Case complexity?	yes	70	90.9
	no	7	9.1
Do you suggest prioritizing of MDT meeting by availability of MDT members with in the meeting?	yes	63	81.8.
	no	14	18.2.0

Regarding the effect on decisions makings in both meetings, the cases that discussed in the GMDT had a higher effect on the decisions makings and the management of 21 cases from a total of 44 cases, than that of the LUCM with 5 cases from a total of 35 cases with significant p value (0.0037), as shown in (table3)

Table 3. Deference in decision making in in MDT and UCM meeting.

Variables		**Type of meeting**		**p-value**
		MDT	**UCM**	
Changing in decision making	**yes**	**21**	**5**	**0.0037**
	no	**23**	**30**	
Total		**44**	**35**	

Regarding time needed for referral of patients in both meetings, the cases discussed in the GMDT have short mean time for referral than that were discussed in LUCM with significant p value (0.0001), as shows in table 4.

Table 4: Comparison of time needed for referral of patients in both meetings.

variables	**Mean Time needed for consultation By days in UCM**			**Mean Time need for consultation by days in MDT**			**P value**
	N	**Mean**	**Std. Deviation**	**N**	**Mean**	**Std. Deviation**	
All type of Tumors	**35**	**7**	**0.5**	**44**	**1**	**0.3**	**0.0001**

III. Discussion

This study shows most of the participants (85.7 % of participants n=77) agreed that the MDT are considered important & central to the delivery of better quality cancer care and treatment of urological cancers,(92.2%of participants) agreed that it helps in decision-making, provided plans and offered different options of treatment to the patients.

In comparison to Jnr GA et al who states that "one resulting decision from the MDT meeting (multidisciplinary discussion) is more effective and accurate than the sum of the most individual decisions". [(3)] Also, even when individual decisions are correct in some cases, the MDT meetings provide confidence of the accuracy of such decisions. In other words, the MDT provides important second opinions for patients. [(10-12)]

In Taylor C et al "a survey of over 2,000 cancer health professionals in the UK, repeated in an international study of breast cancer professionals, showed that over 90% of respondents agreed that effective MDT care results in improved clinical decision-making, better coordinated patient care, more evidence-based treatment decisions, and improved overall quality of treatment". **[(13)]**

About 77.9 % of the participants in this study agreed that the MDT save time and decrease delay in treatments, this due to direct face to face discussion between team member, rapid decisions making about diagnosis and early initiation of treatment, in comparison to Rogers MJ, Matheson L et al "state that the MDT discussion has been recommended as best practice in manging cancer patients, improved satisfaction with treatment and care, shorter timeframes from diagnosis to treatment". [(14)]

Decision making in the management of 21cases from a The total of 44 case than that of the UCM with 5 cases from a total of 35 with significant p value (0.0037), MDT cases have shorter mean time from diagnosis to beginning of the treatment than that of UCM cases(33.5 vs 24.4) with significant p value (0.0001).

This effect contributed to availability of other specialties members who are offered many options, modalities and suggestions that affect the plane of management. (Therapeutic and diagnostic effect). Regarding decisions making, in comparison to the studies from the Johns Hopkins 1-day diagnostic clinic in the US tried to evaluate the effect of MDTs by determining how often referral diagnoses and treatment plans are altered after evaluation by a specialized MDT. They also found a considerable decrease in the time between diagnosis and the initiation of treatment (42.2 days vs. 29.6 days; $P < 0.0008$)". **[(12)]** In compared to (Rogers MJ et al) stated that "MDT provided shorter timeframes from diagnosis to treatment", which is support results of this study. **[(14-17)]**.

IV. Conclusion

- Multi-disciplinary teams are considered important & central to the delivery of better quality cancer care and treatment of urological cancers,
- MDT helps in decision-making, provided plans and offered different options of treatment to the patients.
- The MDT meeting save the time decreases the delays in treatments, and decrease time from diagnosis to treatment.
- Splitting of MDT meeting may improve the MDT working and the clinical decision-making in order to be sure that every case is receiving a thorough and comprehensive review.

V. Recommendation

- Establishment of urological MDT for management of urology cancer cases
- Increase enthusiasm and encouragement of oncologist, radiologist and histopathologist, who are interested in management of urological cancers for attending the meeting.
- The establishment of a Team secretary who will provide clerical support and coordinator for the MDT, the secretary should record all decisions made by the team, accurate medical documentation for all urological cancer, which helps to conduct extensive researchin future.

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